

## The Relationship between Social Physique Anxiety and Obsessive-Compulsive Disorders with Eating Problems among Adolescent

Shahla Mohamadirizi<sup>1</sup>, Akbar Hasanzadeh<sup>2</sup>, Gholamreza Ghasemi<sup>3</sup>,  
\*Soheila Mohamadirizi<sup>4</sup>

<sup>1</sup> Department of Nursing, Nursing and Midwifery School, Isfahan University of Medical Science, Isfahan, Iran.

<sup>2</sup> MSc in Statistics, School of Health, Isfahan University of Medical Science, Isfahan, Iran.

<sup>3</sup> Psychological School, Isfahan University of Medical Science, Isfahan, Iran.

<sup>4</sup> Department of Midwifery, Nursing and Midwifery School, Isfahan University of Medical Science, Isfahan, Iran.

### Abstract

#### Introduction

Social physique anxiety (SPA) and Obsessive-compulsive disorders (OCD) are highly correlated and have been considered to be important in understanding eating problems. However SPA and OCD have not been directly studied with respect to eating problems. Thus, the aim of this study was to examine the relationship between SPA and OCD and measures of eating problems.

#### Materials and Methods

This cross-sectional analytical study was done on 100 adolescent girls in Isfahan-Iran. The girls completed questionnaires measuring Social physique anxiety scale (SPAS, 17-item), Obsessive-Compulsive Disorders (30- item) and Eating problems (31-item). Data were analyzed by the statistical tests of Pearson correlation coefficient, Student's t-test, one-way analysis of variance (ANOVA), and regression through SPSS version 14.

#### Results

The mean age of students was  $15.1 \pm 2.3$ , 53% had normal Body mass index (BMI) and 83% of them had moderate economical status. There was a positive correlation between the rate of eating problems symptoms with OCD ( $P < 0.05$ ,  $r = 0.365$ ). Also, there was a positive correlation between the rate of eating problems symptoms with SPA, too ( $P < 0.05$ ,  $r = 0.360$ ).

#### Conclusion

The results indicate that SPA and OCD appears to be a useful construct for understanding eating problems in girls adolescent.

**Key Words:** Adolescent, Eating problems, Obsessive compulsive disorder, Social physique anxiety.

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#### \*Corresponding Author:

Soheila Mohamadirizi, Department of Midwifery, Nursing and Midwifery School, Isfahan University of Medical Science, Isfahan, Iran.

Email: mohamadirizi@yahoo.com

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## Introduction

Today, psychosomatic diseases have a special place in psychiatry and as the time passes by the relationship between physical illness and human psyche becomes more apparent. Therefore, more emphasis should be given to psychological issues in order to provide appropriate treatment for these diseases (1). Anxiety disorders are one of the psychosomatic diseases and social anxiety and obsessive-compulsive can be mentioned as the most important of these disorders. Anxiety and obsessive-compulsive disorder consist of a series of ritualistic behaviours or persistent and repetitive thoughts that the person feels he needs to do in response to an inner compulsion in order to reduce the internal anxiety. The outbreak of obsessive-compulsive has been reported to be 2-3 percent (2).

Social anxiety is fear of negative evaluation by others and is the first feature of the disorder determined with a clear and persistent fear of one or more social situations in which patients feel that their actions and their behaviours are judged and they avoid social situations and interpersonal relationships. The prevalence of this disorder among adolescents and children has been 1-10 percent and this rate among girls compared with boys is 1.5 to 1. This disorder begins in adolescence and decreases the performance at school and at work and increases the risk of leaving school, inability to perform major social roles and also creates dissatisfaction and lack of friends (4, 5). According to what has been mentioned, anxiety disorders will result in other problems, including eating problems. Eating problems are syndromes in which cognitive changes related to food, body weight and bad eating patterns can nutritionally and medically lead to life-threatening complications. These problems can be seen at all socioeconomic classes and ethnic groups (6).

Eating problems in adolescents, especially among female adolescents, is a major health problem. These problems occur for 1-4% of adolescents (7). The prevalence of people at risk for eating disorders has been different in various countries including Saudi Arabia 19.6%, Japan 5.4%, the U.S.A. 22%, Canada 16%, the U.K. 4.92% and Spain 12.3% (6, 2). In Iran, the studies in this field are extremely limited. The results of a study in Tabriz showed that 16.7 percent of female students were at risk for these disorders (8); and since the prevalence of anxiety disorders and eating problems in different regions, populations and ages are different, and these disorders occur along with many other psychiatric diseases, including anxieties that cause major malformations in all aspects of his performance (9-11) and also due to the lack of regional comprehensive and appropriate statistical studies on the prevalence of the disorders and the relationship of these disorders among adolescents, especially female students, therefore, this study was aimed to determine the relationship between social anxiety and obsessive-compulsive disorders with eating problems in adolescent girl students in Isfahan.

## Materials and Methods

The present study was a cross sectional descriptive-analytic research. Statistical populations were high-school girl students in Isfahan, the Central of Iran. The sample size in this study was calculated to be 100 using statistical calculations. The multi-stage sampling method was used and districts 1, 2, and 3 of the Education and Training Office of Isfahan city were selected as categories of sampling. Then from each district one school was chosen randomly based on the table of random numbers and then from each school, 34 students were selected randomly from different disciplines and classes.

Inclusion criteria included the following:

- Iranian girl student,
- Muslim,
- Grade one to fourth of high school,
- Having written consent for participation in the study.

The exclusion criteria included:

- Taking medications that affect mental,
- Having medical disease,
- Being married,
- One of the parents suffering from mild to severe mental illness and being a professional athlete.

In this study demographic information such as age, education, parents' occupations, parents' education and Body mass index (BMI) were measured. Furthermore, a 17 item questionnaire for assessing social anxiety was also completed. This questionnaire was graded based on a 5-point Likert scale from 0 (not at all) to 4 (extremely) and the cut-off point of this tool has been 19 and the total score this tool has been between 0 and 68. Scores  $\geq 19$  indicate the presence of social anxiety.

The validity and reliability of the questionnaire has been approved by Mohammadi Rizi et al. in previous studies (12). Maudsley Inventory was used to assess obsessive-compulsive disorder, which includes 30 questions (true and false) and the scores ranges from 0-30 in this questionnaire and the cut off point for diagnosing this disorder was determined to be 11 or more. This means that the scores higher than 11 indicate the presence of obsessive-compulsive disorder which has been approved and used in Valizadeh and Mohammad Rizi's studies (13, 14).

A 31-item questionnaire for eating disorders also included two items of true (score of one) and false (score of zero),

and its validity and reliability has been approved by Mohamadrizi (15). It should be mentioned that the above-mentioned questionnaire has been conducted after obtaining permission and approval of the Vice Chancellor for Research, Ethics Committee of Isfahan University of Medical Sciences and Education and Training Office of Isfahan (ID Number: 191026). The collected data were analyzed using statistical software SPSS (version 14) and also using the student's t-test, one way ANOVA, chi-square, correlation coefficient and linear regression model. A P value less than 0.05 were significant.

## Results

The results showed that the mean age of students was  $15.1 \pm 2.3$ , 53 (53%) had normal BMI, 83 (83%) of students had average economic and social situation and 78 (78%) had non-academic education. Furthermore, the mean and standard deviations (SD) of obsessive-compulsive disorder, social anxiety and eating problems are respectively listed in (Table.1).

**Table 1:** The mean and SD of total scores of social anxiety, obsessive compulsive and eating problems in girls' high school students in Isfahan-Iran

Variables	Mean	SD
Eating problems	12.8	2.2
Social anxiety	16.3	1.3
Obsessive compulsive	45.1	3.4

Also, the findings showed that based on Pearson's correlation test, a significant direct correlation was found between social anxiety, obsessive compulsive and eating problems (Table.2).

**Table 2:** Correlation between social anxiety, obsessive compulsive and eating problems in girls' high school students in Isfahan-Iran

Variables	Eating problems	
	P value	r
Social anxiety	P=0.001	0.365
Obsessive compulsive	P=0.001	0.360

## Discussion

Based on the results of the present study there was a positive correlation between social anxiety disorder and obsessive-compulsive with eating disorders. This means that as social anxiety and obsessive compulsive increase, eating problems also increases. In this regard, results of Mohammadi Rizi (14), Levinson (8) and Slikal (16) also showed that there was correlation between social anxiety and eating disorders in students. Whereas based on the results of Bas's study (17), there was no correlation between the eating problems and social anxiety. Wunderlich's study (18) showed that although generally social anxiety and eating disorders are not related, social anxiety is the only aspect of anxiety disorders that was associated with eating disorders. In fact, because eating problems are characterized with behaviours such as eating little and eating a lot, surely it can be said that the presence of such features in these people has intensified their concerns and conflicts about increasing and decreasing and growing of this anxiety will result in irreparable consequences, including psychological problems, especially social anxiety and obsessive compulsive disorders which are considered as two important indicators of anxiety disorders which confirms the results of the present study (13).

Perhaps cultural and social reasons with emphasis on slimming and having a diet are considered by all social classes and ethnic minorities and even families. Considering Iran's young population, high prevalence of eating disorders is justifiable because generally this age group are more influenced by other cultures and care about the standards of those cultures (19).

## Conclusion

The results of the present study indicated that there is a positive correlation

between social anxiety disorder and obsessive compulsive disorder with eating problems among female students. Therefore, training all health care workers in the field of mental problems such as nutrition and anxiety issues can be effective in diagnosis and early detection of these symptoms in female students.

**Conflict of Interest:** None.

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